

Serial No. 10/771,778  
Response date September 11, 2006  
Reply to Office Action of May 10, 2006

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### AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

#### Listing of the Claims

1. (Currently Amended) A process for forming a filter material, comprising the steps of:
  - a) ~~coating a filter particle with a coating comprising a lignosulfonate~~applying an aqueous lignosulfonate coating onto a filter particle;
  - b) carbonizing said coating; and
  - c) activating said coating.
2. (Currently Amended) The process of claim 1, wherein said lignosulfonate is selected from the group consisting of ammonium lignosulfonate, zinc lignosulfonate, calcium lignosulfonate, ferric lignosulfonate, magnesium lignosulfonate, chromium lignosulfonate, manganese lignosulfonate, ~~sodium lignosulfonate, copper lignosulfonate, and mixtures thereof.~~
3. (Canceled)
4. (Original) The process of claim 1, wherein said filter particle comprises a glass fiber.
5. (Previously Amended) The process of claim 1, wherein said filter material comprises a screen, a ceramic fiber, a woven, a non-woven, or mixtures thereof.
6. (Original) The process of claim 1, further comprising the step of drying said coating.
7. (Original) The process of claim 1, wherein the coating add-on before carbonization is between about 0.5% and about 97%.
8. (Original) The process of claim 1, wherein the carbon add-on in the carbonized coating is between about 0.2% and about 95%.

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9. (Original) The process of claim 1, wherein the carbon add-on in the activated coating is between about 0.1% and about 85%.

10. (Currently Amended) The process of claim 1, wherein the temperature during said step of carbonization is between ~~about 500°C~~ 600°C and about ~~1000°C~~ 900°C.

11. (Original) The process of claim 1, wherein the temperature during said step of activation is between about 550°C and about 1300°C.

12. (Original) The process of claim 1, wherein the BET surface area of said filter particle after the activation step is between about 500 m<sup>2</sup>/g and about 3000 m<sup>2</sup>/g.

13. (Previously Presented) The process of claim 1, wherein the sum of mesopore and macropore volumes of said filter particle is between about 0.2 mL/g and about 2.2 mL/g.

14. (Previously Presented) The process of claim 1, wherein the ratio of the sum of mesopore and macropore volumes to micropore volume is between about 0.3 and about 3.

15. (Canceled)

16. (Canceled)

17. (New) A process for forming a filter material, consisting of:

- a) coating a filter particle with a lignosulfonate;
- b) drying said coating;
- c) carbonizing the coating at a temperature from 600°C to about 900°C; and
- d) activating the coating.

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18. (New) The process according to claim 17, wherein the lignosulfonate is selected from the group consisting of ammonium lignosulfonate, zinc lignosulfonate, calcium lignosulfonate, ferric lignosulfonate, magnesium lignosulfonate, chromium lignosulfonate, manganese lignosulfonate, copper lignosulfonate, and mixtures thereof.

19. (New) The process according to claim 17, wherein the step of carbonizing the coating is at a temperature from about 630°C to about 800°C.

20. (New) A process for forming a filter material, comprising:

- a) forming an aqueous lignosulfonate solution ;
- b) mixing the aqueous lignosulfonate solution with filter particles to form aqueous lignosulfonate-coated filter particles;
- c) drying the aqueous lignosulfonate-coated filter particles;
- d) carbonizing the aqueous lignosulfonate-coated filter particles in a furnace at a temperature from 600°C to about 900°C; and
- e) activating the carbonized, aqueous lignosulfonate-coated filter particles in a furnace.